AUTHOR INDEX

VOLUME 15 (1972)

Bailey, H. J., 185
Banner, M. W., 325
Beard, J. P., 80
Beechey, C. V., 89, 169
Bowman, J. T., 86
Bresler, S. E., 101
Bron, S., 1, 11, 377, 395
Brown, M. S., 348
Brusick, D. J., 425

Caillet-Fauquet, P., 353
Campbell, D. A., 361
Chan, P., 358
Corp, M. J., 89

Deering, R. A., 82
Defais, M., 353
Denell, R. E., 221
Doherty, D. G., 175

Ehling, U. H., 175
Evans, E. P., 169

Felkner, I. C., 233
Ford, C. E., 169
Freim, J. O., 82
Friedberg, E. C., 113
Furuyama, J., 98

Glenister, P. H., 191
Gonzalez, F. W., 303
Graf, U., 31, 287
Grahn, D., 331
Grigor'ev, Yu. G., 215

Hart, M. G. R., 247
Howe, T. G. B., 80

Inagaki, E., 229
Ivanov, B. A., 215

James, A. P., 125

Kadohama, N., 227
Kalinin, V. L., 101
Kerr, T. L., 247
Khalizev, A. E., 203
Klisak, I., 358
Kondo, S., 98
Kondratiev, Yu. S., 371
Kraemer, K. H., 92

Laumbach, A. D., 233
Lea, R. A., 331
Leslie, W. P., 331
Lüers, H., 77
Luss, E. V., 203
Lyon, M. F., 185, 191

Maier, P., 41
Mailhes, J. B., 325
Malling, H. V., 175
Malyutina, T. S., 215
Marshak, M. I., 203
Mayer, V. W., 147
McCarter, J. A., 227
McCullough, R. S., 125
McFee, A. F., 325
Miki, Y., 98
Mileva, M. S., 215
Mohan Rao, P. K., 155
Muhlstock, B., 227

Nasim, A., 125
Nöthel, H., 277
Norman, A., 358

Obe, G., 77, 224
Osgood, C., 355
Ottoman, R. E., 358

Papworth, D. G., 89
Parry, E. M., 135
Parry, J. M., 135
Payez, J. F., 82
Petrova, O. N., 203
Phillips, R. J. S., 185, 191

Radford, A., 23
Rizhov, N. I., 215
Robbins, J. H., 92
Rowe, L. B., 361
Ruch, P., 31

Searle, A. G., 89, 169
Seiler, J. P., 273
Shapiro, N. I., 203
Sherrill, M. N., 325
Simmons, J. R., 86
Skavronskaya, A. G., 371
Smith-Keary, P. F., 259
Sobels, F. H., 229
Sukhodolova, A. T., 101

Takebe, H., 98
Timson, J., 197

Todorov, S. L., 215
Tuveson, R. W., 411

Valcovic, L. R., 67
Varshaver, N. B., 203
Venema, G., 1, 11, 377, 395
Verley, F. A., 331

Waters, E., 135
Webb, R. B., 348
Westerman, M., 55
Wolff, S., 435
Woodruff, R. C., 86
Würgler, F. E., 31, 41

Zimmering, S., 355

SUBJECT INDEX

VOLUME 15 (1972)

Acetophenone, irradiation in presence of, sensitized photoinactivation of *B. subtilis* markers, 377
Acridine orange, in T4, 227
Acridine yellow, in T4, 227
9-Aminoacridine, in T4, 227
2-, 4- and 6-Aminobenzimidazole, in *S. typhimurium*, 273
2-Aminofluorene, in *S. typhimurium*, 273
9-Amino-10-methylacridinium iodide, in T4, 227
2-Aminopurine, in *S. typhimurium*, 273
Apholate, in *Bracon hebetor*, 67
Auxotroph, proline, of *S. typhimurium*, partial reversions of, cross-feeding and cell-to-cell contact, 259
8-Azaguanine, spontaneous mutations to resistance, in mammalian cells, 203

Bacillus subtilis, action of supermutagens, 101
—, formation of a 4-nitroquinoline, 1-oxide complex with DNA, 233
—, UV inactivation and excision repair, 1, 11, 377, 395
Bacteriophage, lambda, damaged by different agents, effects of *rec* and *exr* mutations of *E. coli* on UV reactivation of, 247
—, T4, enhanced recovery of *r*II mutations in absence of selection in a ligase-negative mutant, 361
—, —, excision repair endonuclease, studies on substrate specificity of, 113
—, —, mutagenicity of 10-methylated acridines for, 227
Barley, influence of pH on damage induced by diethyl sulphate, 155
Benzimidazole, in *S. typhimurium*, 273
Benzimidazole-2-carbamic acid, methyl ester, in *S. typhimurium*, 273
p-Benzochinone, in *D. melanogaster*, 77
2,5-Bis-(ethylenimino)-*p*-benzoquinone, intrachromosomal distribution of lesions and breaks in *V. faba*, 224
Blood, leucocytes, of pig, disappearance rates of radiation-induced aberrations, 325
Bracon hebetor, adult, genetic response to ethylenimine 67
5-Bromouracil, in phage lambda, effects of *rec* and *exr* mutations of *E. coli* on UV reactivation of, 247
—, sensitization of *pol*$^+$ and *pol A1* bacteria to physical and chemical agents, 371

Caffeine, in mitosis of human lymphocytes, 197
—, in 4-nitroquinoline 1-oxide-treated *B. subtilis*, 233
Carcinogen, 4-nitroquinoline 1-oxide, high sensitivity of xeroderma pigmentosum cells to, 98
Cell-to-cell contact, associated with cross-feeding, partial reversions of a proline auxotroph of *S. typhimurium*, 259
Chiasma frequency, dose response of, X-irradiation in *Chorthippus brunneus*, 55
Chinese hamster, cells, spontaneous gene mutations in, 203
Chloramphenicol, in 4-nitroquinoline 1-oxide-treated *B. subtilis*, 233
Chorthippus brunneus, dose response of chiasma frequency to X-irradiation, 55
Chromosome, II, maternal, X-ray-induced loss in *D. melanogaster* inseminated eggs, 31
Cross-feeding, associated with cell-to-cell contact, partial reversions of a proline auxotroph of *S. typhimurium*, 259
Cycloheximide, repair of X-ray-induced aberrations in stimulated and unstimulated human lymphocytes, 435

Dictyostelium discoideum, lethal effect of UV or alkylating agents on γ-ray-resistant or -sensitive strain of, 82
Diethyl sulphate, in barley, influence of pH, 155
N,N'-Dimethyl-*N*-nitrosourea, in *B. subtilis*, 101
Dimethylsulphoxide, in *S. typhimurium*, 273
DNA, synthesis, unscheduled, in some spontaneous human tumours, 358
Drosophila melanogaster, decrease in radiosensitivity to stage-7 oocytes, 277
—, measurement of radiation-induced lethals in stage-14 oocytes, 355
—, nature of reversion of a dominant gene of, 211
—, possible mutagenic activity of *p*-benzochinone, 77
—, sex-chromosome loss in X-rayed mature sperm, 41
—, sex-influenced reversion of mutant *forked-3n*, 86
—, sperm, radiosensitivity before and after insemination of egg, 287
—, spermatids, postradiation treatment, repair at specific loci, 229

Drosophila melanogaster, (continued)
—, X and neutron irradiation in mature sperm, 303
—, X-ray-induced loss of maternal chromosome II in inseminated eggs, 31

Egg, inseminated, of *D. melanogaster*, X-ray-induced loss of maternal second chromosome, 31
Embryo, human lung cells, spontaneous gene mutations, 203
Escherichia coli, effects of *rec* and *exr* mutations of, on UV reactivation of phage lambda damaged by different agents, 247
—, enhanced recovery of *r*II mutations in absence of selection in ligase-negative mutant of phage T4, 361
—, photoreactivation of 365 nm inactivation, 348
—, *pol*$^+$ and *pol A1*, 5-bromouracil sensitization of, to physical and chemical agents, 371
—, selection of nonflagellate mutants, 80
—, studies on substrate specificity of T4 excision repair endonuclease, 113
—, UV reactivation of phage lambda in a *polA* mutant, 353
Ethylenimine, in *Bracon hebetor*, 67
Ethyl methanesulphonate, differential spermatogenic response of mice, 175
—, lethal effects in *Dictyostelium discoideum*, 82
—, in β-propiolactone-induced mutants, of *S. cerevisiae*, 425
—, in *S. pombe*, 125

Fractionation, of repeated small doses, in mouse spermatogonia, 185, 191
—, short-term, X-rays in mouse spermatogonia 169
2-(2-Furyl)benzimidazole, in *S. typhimurium*, 273

Gene, dominant, *Nasobemia* (*Ns*), of *D. melanogaster*, nature of reversion, 221
Grasshopper, British, dose response of chiasma frequency to X-irradiation, 55

Hordeum vulgare, influence of pH on damage induced by diethyl sulphate, 155
Human, embryonic lung cells, spontaneous gene mutations, 203
—, leucocytes, possible mutagenic activity of *p*-benzochinone, 77
—, lymphocytes, effect of theobromine, theophylline and caffeine on mitosis, 197
—, —, peripheral, X-irradiation and 50-MeV protons, 215
—, —, stimulated and unstimulated, repair of X-ray-induced aberrations, 435
—, —, of xeroderma pigmentosum patients, abnormal rate and duration of UV-induced thymidine incorporation in, 92
—, tumours, spontaneous, unscheduled DNA synthesis in, 358
—, xeroderma pigmentosum cells, high sensitivity to 4-nitroquinoline 1-oxide, 98
Hydroxylamine, in *N. crassa* mutants, 23
—, in phage lambda, effects of *rec* and *exr* mutations of *E. coli* on UV reactivation of, 247
Hydroxylation system, enzyme-free, breakdown products of 1- and 2-naphthylamine formed in, in *S. cerevisiae*, 147
N-Hydroxy-1-naphthylamine and -2-naphthylamine, in enzyme-free hydroxylation system, in *S. cerevisiae*, 147
Hydroxyurea, repair of X-ray-induced aberrations in stimulated and unstimulated human lymphocytes, 435

ICR-170, in β-propiolactone-induced mutants of *S. cerevisiae*, 425
—, restoration of a single enzyme function in *N. crassa* mutants, 23
Insemination, radiosensitivity of *D. melanogaster* sperm before and after, 287
Irradiation, γ, disappearance rates of induced aberrations from swine leucocytes, 325
—, —, ionizing, resistant or sensitive strains of *Dictyostelium discoideum* to, lethal effect of alkylation or UV, 82
—, protons, 50 MeV, in human peripheral lymphocytes, 215
—, UV, abnormal rate and duration of induced thymidine incorporation in xeroderma pigmentosum patients, 92
—, —, analysis of a gene controlling sensitivity in *N. crassa*, 411
—, —, 5-bromouracil sensitization of *pol*$^+$ and *pol A1 E. coli* to lethal action, of, 371
—, —, inactivation and excision repair in *B. subtilis*, 1, 11, 377, 395
—, —, lethal effect on γ-ray-resistant or -sensitive strain of *Dict. discoideum*, 82
—, —, in *N. crassa* mutants, 23
—, —, photoreactivation of 365 nm inactivation in *E. coli*, 348
—, —, reactivation of phage lambda, damaged by different agents, effects of *rec* and *exr* mutations of *E. coli* on, 247
—, —, —, in a *polA* mutant of *E. coli*, 353
—, —, sensitive mutants of *S.cerevisiae*, genetic and physiological analysis, 135
—, —, studies, on substrate specificity of T4 excision repair endonuclease, 113
—, —, in xeroderma pigmentosum cells, 98
—, UV and electron, unscheduled DNA synthesis in some spontaneous human tumours, 358
—, X, in *Chorthippus brunneus*, dose response of chiasma frequency, 55
—, —, in *D. melanogaster*, 277
—, —, —, radiosensitivity before and after insemination, 287
—, —, in human peripheral lymphocytes, 215
—, —, induced dominant lethals in stage-14 oocytes of *D. melanogaster*, 355
—, —, loss of maternal chromosome II in *D. melanogaster* eggs, 31
—, —, in mature sperm of *D. melanogaster*, sex-chromosome loss, 41

Irradiation, X, *(continued)*
—, —, of mouse spermatogonia, 89
—, —, —, short-term fractionation, 169
—, —, nature of reversion of a dominant gene of *D. melanogaster*, 221
—, —, postradiation treatment in Drosophila spermatids, 229
—, —, repair of aberrations in stimulated and unstimulated human lymphocytes, 435
—, —, sex-influenced reversion of unstable mutant *forked-3n* of *D. melanogaster*, 86
—, —, sex-linked lethals and detrimentals in mouse, 331
—, —, in *S. pombe*, nature of replicating instability, 125
—, X and γ, repeated small doses to mouse spermatogonia, 185, 191
—, X and neutron, in mature sperm of *D. melanogaster*, 303
Isopropyl methanesulphonate, in mouse spermatogonia, 175

Leucocytes, human, possible mutagenic action of *p*-benzochinone, 77
—, swine, disappearance rates of radiation-induced aberrations, 325
Liquid holding, genetic and physiological analysis of UV-sensitive mutants of *S. cerevisiae*, 135
Lung, human embryo, cells, spontaneous gene mutations, 203
Lymphocytes, human, effect of theobromine, theophylline and caffeine on mitosis, 197
—, —, peripheral, X-rays and 50-MeV protons in, 215
—, —, stimulated and unstimulated, repair of X-ray-induced aberrations, 435
—, of xeroderma pigmentosum patients, abnormal rate and duration of UV-induced thymidine incorporation in, 92

Mammal, cells, spontaneous gene mutations in human and Chinese hamster cells, 203
6-Mercaptopurine, spontaneous mutations to resistance, in mammalian cells, 203
2-Methylbenzimidazole, in *S. typhimurium*, 273
Methyl methanesulphonate, 5-bromouracil sensitization of *pol*$^+$ and *pol A1* bacteria to lethal action of, 371
—, differential spermatogenic response in mice, 175
—, lethal effects in *Dictyostelium discoideum*, 82
N-Methyl-*N'*-nitro-*N*-nitrosoguanidine, in bacteriophage T4, role of endonuclease, 113
—, in *B. subtilis*, 101
—, in *N. crassa* mutants, 23
—, in β-propiolactone-induced mutants of *S. cerevisiae*, 425
—, selection of nonflagellate mutants of *E. coli*, 80
N-Methyl-*N*-nitrosourea, in *B. subtilis*, 101
Mitomycin C, in bacteriophage T4, role of endonuclease, 113
—, 5-bromouracil sensitization of *pol*$^+$ and *pol A1 E. coli* to lethal action of, 371
Mitosis, of human lymphocytes, effect of theobromine, theophylline and caffeine on, 197
Mould, slime, lethal effect of UV or alkylating agents, on γ-ray-resistant or -sensitive strain of, 82
Mouse, radiation-induced mutation rate for sex-linked lethals and detrimentals, 331
—, spermatogenic responses to *n*-propyl and isopropyl methanesulphonate, 175
—, spermatogonia, repeated small radiation doses, 185, 191
—, —, short-term fractionation of X-rays, 169
—, —, X-irradiation, 89
Mutagen, acridine orange, in bacteriophage T4, 227
—, acridine yellow, in T4, 227
—, 9-aminoacridine, in T4, 227
—, 2-, 4- and 6-aminobenzimidazole, in *S. typhimurium*, 273
—, 2-aminofluorene, in *S. typhimurium*, 273
—, 9-amino-10-methylacridinium iodide, in T4, 227
—, 2-aminopurine, in *S. typhimurium*, 273
—, apholate, in *Bracon hebetor*, 67
—, 8-azaguanine, spontaneous mutations to resistance, in mammalian cells, 203
—, benzimidazole, in *S. typhimurium*, 273
—, benzimidazole-2-carbamic acid, methyl ester, in *S. typhimurium*, 273
—, *p*-benzochinone, in *D. melanogaster*, 77
—, 2,5-bis-(ethylenimino)-*p*-benzoquinone, in-trachromosomal distribution of lesions and breaks in *V. faba*, 224
—, 5-bromouracil, in phage lambda, effects of *rec* and *exr* mutations of *E. coli* on UV reactivation of, 247
—, —, sensitization of *pol*$^+$ and *pol A1* bacteria to physical and chemical agents, 371
—, caffeine, in mitosis of human lymphocytes, 197
—, —, in 4-nitroquinoline 1-oxide-treated *B. subtilis*, 233
—, chloramphenicol, in 4-nitroquinoline 1-oxide-treated *B. subtilis*, 233
—, cycloheximide, repair of X-ray-induced aberrations in stimulated and unstimulated human lymphocytes, 435
—, diethyl sulphate, in barley, influence of pH, 155
—, *N,N'*-dimethyl-*N*-nitrosourea, in *B. subtilis*, 101
—, dimethylsulphoxide, in *S. typhimurium*, 273
—, ethylenimine, in *Bracon hebetor*, 67
—, ethyl methanesulphonate, differential spermatogenic response of mice, 175
—, —, lethal effects in *Dictyostelium discoideum*, 82
—, —, in β-propiolactone-induced mutants of *S. cerevisiae*, 425
—, —, in *S. pombe*, 125
—, 2-(2-furyl)benzimidazole, in *S. typhimurium* 273
—, hydroxylamine, in *N. crassa*, mutants, 23

Mutagen, hydroxylamine, *(continued)*
—, —, in phage lambda, effects of *rec* and *exr* mutations of *E. coli* on UV reactivation of, 247
—, *N*-hydroxy-1-naphthylamine and 2-naphthylamine, in enzyme-free hydroxylation system, in *S. cerevisiae*, 147
—, hydroxyurea, repair of X-ray-induced aberrations in stimulated and unstimulated human lymphocytes, 435
—, ICR-170, in β-propiolactone-induced mutants of *S. cerevisiae*, 425
—, —, restoration of a single enzyme function in *N. crassa* mutants, 23
—, isopropyl methanesulphonate, in mouse spermatogonia, 175
—, 6-mercaptopurine, spontaneous mutations to resistance, in mammalian cells, 203
—, 2-methylbenzimidazole, in *S. typhimurium*, 273
—, methyl methanesulphonate, 5-bromouracil sensitization of *pol*$^+$ and *pol A1* bacteria to lethal action of, 371
—, —, differential spermatogenic response in mice, 175
—, —, lethal effects in *Dictyostelium discoideum*, 82
—, *N*-methyl-*N'*-nitro-*N*-nitrosoguanidine, in bacteriophage T4, role of endonuclease, 113
—, —, in *B. subtilis*, 101
—, —, in *N. crassa* mutants, 23
—, —, in β-propiolactone-induced mutants of *S. cerevisiae*, 425
—, —, selection of nonflagellate mutants of *E. coli*, 80
—, *N*-methyl-*N*-nitrosourea, in *B. subtilis*, 101
—, mitomycin C, in bacteriophage T4, role of endonuclease, 113
—, —, 5-bromouracil sensitization of *pol*$^+$ and *pol A1 E. coli* to lethal action of, 371
—, 4-nitrobenzimidazole, in *S. typhimurium*, 273
—, nitrogen mustard, in bacteriophage T4, role of endonuclease, 113
—, —, lethal effects in *Dict. discoideum*, 82
—, —, in phage lambda, effects of *rec* and *exr* mutations of *E. coli* on UV reactivation of, 247
—, 4-nitroquinoline 1-oxide, in bacteriophage T4, role of endonuclease, 113
—, —, 5-bromouracil sensitization of *pol*$^+$ and *pol A1 E. coli* to lethal action of, 371
—, —, formation of a complex with DNA, in *B. subtilis*, 233
—, —, high sensitivity of xeroderma pigmentosum cells, 98
—, nitrosoethylurea, in *B. subtilis*, 101
—, nitrosourea, substituted, in *B. subtilis*, 101
—, nitrous acid, analysis of a gene controlling sensitivity in *N. crassa*, 411
—, —, in *B. subtilis*, 101
—, —, in *N. crassa* mutants, 23
—, —, in phage lambda, effects of *rec* and *exr* mutations of *E. coli* on UV reactivation of, 247
Mutagen, *(continued)*
—, proflavine, in T4, 227
—, β-propiolactone, in *S. cerevisiae*, 425
—, *n*-propyl methanesulphonate, in mouse spermatogonia, 175
—, sodium nitrite, in *B. subtilis*, 101
—, theobromine, in mitosis of human lymphocytes, 197
—, theophylline, in mitosis of human lymphocytes, 197
Mutant, *forked-3n*, of *D. melanogaster*, sex-influenced reversion, 86
—, ligase-negative, of phage T4, enhanced recovery of *r*II mutations in absence of selection in, 361
—, nonflagellate, of *E. coli*, selection of, 80
—, *polA*, of *E. coli*, UV reactivation of phage lambda, 353
—, *pyr-3*, of *N. crassa*, restoration of a single enzyme function, 23

1- and 2-Naphthylamine, breakdown products of, in enzyme-free hydroxylation system, in *S. cerevisiae*, 147
Neurospora crassa, analysis of a gene controlling UV sensitivity, 411
—, bifunctionally defective nonpolar *pyr-3* mutants, restoration of a single enzyme function, 23
4-Nitrobenzimidazole, in *S. typhimurium*, 273
Nitrogen, purified, X-irradiation in, radiosensitivity of *D. melanogaster* sperm, 287
Nitrogen mustard, in bacteriophage T4, role of endonuclease, 113
—, lethal effects in *Dictyostelium discoideum*, 82
—, in phage lambda, effects of *rec* and *exr* mutations of *E. coli* on UV reactivation of, 247
4-Nitroquinoline 1-oxide, in bacteriophage T4, role of endonuclease, 113
—, 5-bromouracil sensitization of *pol*$^+$ and *pol A1 E. coli* to lethal action of, 371
—, formation of a complex with DNA, in *B. subtilis*, 233
—, high sensitivity of xeroderma pigmentosum cells to, 98
Nitrosoethylurea, in *B. subtilis*, 101
Nitrosourea, substituted, in *B. subtilis*, 101
Nitrous acid, analysis of a gene controlling sensitivity in *N. crassa*, 411
—, in *B. subtilis*, 101
—, in *N. crassa* mutants, 23
—, in phage lambda, effects of *rec* and *exr* mutations of *E. coli* on UV reactivation of, 247

Oocytes, of *D. melanogaster*, X-irradiation, 277
—, stage 14, of *D. melanogaster*, radiation-induced dominant lethals, 355
Oxygen, X-irradiation in, radiosensitivity of *D. melanogaster* sperm, 287

pH, influence of, on diethyl sulphate-induced damage in barley, 155

Phage, λ, UV reactivation of, in a *polA* mutant of *E. coli*, 353
—, χ, selection of nonflagellate mutants of *E. coli*, 80
Photoinactivation, sensitized, of transforming *B. subtilis* markers, involving irradiation in presence of acetophenone, 377
Photoreactivating light, analysis of UV-sensitive mutants of *S. cerevisiae*, 135
Photoreactivation, of 365 nm inactivation in *E. coli*, 348
Pig, leucocytes, disappearance rates of radiation-induced aberrations, 325
Postradiation treatment, N_2 or O_2, repair at specific loci in *D. melanogaster*, 229
Proflavine, in T4, 227
β-Propiolactone, in *S. cerevisiae*, 425
n-Propyl methanesulphonate, in mouse spermatogonia, 175

Replicating instability, nature of, in *S. pombe*, 125

Saccharomyces cerevisiae, activity of β-propiolactone, 425
—, breakdown products of 1- and 2-naphthylamine in enzyme-free hydroxylation system, 147
—, UV-sensitive mutants, 135
Salmonella typhimurium, benzimidazole and its derivatives in, 273
—, partial reversions of a proline auxotroph, cross-feeding and cell-to-cell contact, 259
Schizosaccharomyces pombe, nature of replicating instability, 125
Sex chromosome, of *D. melanogaster*, loss in X-rayed mature sperm, 41
Sex-influenced reversion, of mutant *forked-3n* of *D. melanogaster*, 86
Sex-linked lethals, in mouse, after X-irradiation, 331
Sodium nitrite, in *B. subtilis*, 101
Sperm, of *D. melanogaster*, radiosensitivity before and after insemination, 287
—, mature, of *D. melanogaster*, sex-chromosome loss after X-irradiation, 41
—, —, —, X and neutron irradiation, 303
Spermatids, *D. melanogaster*, postradiation treatment, repair at specific loci, 229
—, —, X-irradiation, 277
Spermatogonia, mouse, repeated small radiation doses, 185, 191
—, —, short-term fractionation of X-rays, 169
—, —, X-irradiation in, 89
—, *n*-propyl and isopropyl methanesulphonate in mouse, response of various stages of, 175
Spermatozoa, of *D. melanogaster*, X-irradiation, 277
Spontaneous gene mutations, in human and Chinese hamster cells, 203
Swine, leucocytes, disappearance rates of radiation-induced aberrations, 325

Temperature, shift-down experiments, mutation in ligase-defective mutant of phage T4, 361
Theobromine, in mitosis of human lymphocytes, 197
Theophylline, in mitosis of human lymphocytes, 197
Thymidine, incorporation, UV-induced in xeroderma pigmentosum patients, abnormal rate and duration of, 92
Thymine starvation, 5-bromouracil sensitization op pol^+ and *pol A1 E. coli* to lethal action of, 371
Tumour, human, spontaneous, unscheduled DNA synthesis in, 358

Vicia faba, intrachromosomal distribution of chemically induced lesions and breaks, 224

Xeroderma pigmentosum, cells, high sensitivity to 4-nitroquinoline 1-oxide, 98
—, patients, abnormal rate and duration of UV-induced thymidine incorporation into lymphocytes, 92
—, unscheduled DNA synthesis in some spontaneous human tumours, 358

Yeast, activity of β-propiolactone, 425
—, breakdown products of 1- and 2-naphthylamine in enzyme-free hydroxylation system, 147
—, nature of replicating instability, 125
—, UV-sensitive mutants, 135